

**REMARKS**

In the non-final Office Action, the Examiner rejects claims 1-28 under 35 U.S.C. § 101 as directed to non-statutory subject matter; rejects claims 1-4, 6-12, 14-25, 27, and 28 under 35 U.S.C. § 103(a) as unpatentable over CHAN et al. (U.S. Patent No. 6,910,028) in view of HWANG (“Detecting Faults In Chained-Inference Rules In Information Distribution Systems,” Dissertation, George Mason University; 1997); and rejects claims 5, 13, and 26 under 35 U.S.C. § 103(a) as unpatentable over CHAN et al. in view of HWANG et al. and BAHRAMI (U.S. Patent Application Publication No. 2004/0078777). Applicant respectfully traverses these rejections.<sup>1</sup>

By way of the present amendment, Applicant amends claims 1-9 and 17-28 to improve form. No new matter has been added by way of the present amendment. Claims 1-28 are pending.

To begin, Applicant notes that the non-final Office Action, mailed July 15, 2008, was mailed after a Notice of Appeal was filed on February 21, 2008 and a subsequent Appeal Brief was filed on April 18, 2008.

**Rejection under 35 U.S.C. § 101**

Claims 1-8 and 17-21 stand rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter because the recited steps are not tied to another statutory class or are not transforming the underlying subject matter to a different state or thing.

Without acquiescing in the Examiner’s rejection, but merely to expedite prosecution,

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<sup>1</sup> As Applicant’s remarks with respect to the Examiner’s rejections overcome the rejections, Applicant’s silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, reasons for modifying a reference and/or combining references, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or that such requirements have been met, and Applicant reserves the right to dispute these assertions/requirements in the future.

Applicant amends claims 1-8 and 17-21, as suggested by the Examiner, to recite a “computer-implemented method.” As such, withdrawal of the rejection of claims 1-8 and 17-21 under 35 U.S.C. § 101 is respectfully requested.

Claims 9-16 stand rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter for being directed to a computer-system that is not physical components to constitute a machine or a manufacture. Without acquiescing in the Examiner’s rejection, but merely to expedite prosecution, Applicant amends claim 9 to recite a memory to store instructions and a processor to execute the instructions, which comprise physical components. As such, withdrawal of the rejection to claims 9-16 under 35 U.S.C. § 101 is respectfully requested.

Claims 22-28 stand rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter for reciting a computer-readable medium consisting of a physical or logical memory device. Without acquiescing in the Examiner’s rejection, but merely to expedite prosecution, Applicant amends claim 22 to recite a “computer-readable memory device.” As such, withdrawal of the rejection of claims 22-28 under 35 U.S.C. § 101 is respectfully requested.

**Rejection under 35 U.S.C. § 103 based on CHAN et al. and HWANG et al.**

Claims 1-4, 6-12, 14-25, 27, and 28 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHAN et al. in view of HWANG et al. Applicant respectfully traverses this rejection.

Claim 1 recites a computer-implemented method of integrating software systems. The method includes identifying a scope of the integration based on a multi-level top-down approach; identifying faults in business rules that define software in the scope of

the integration by applying generic depth-first search (DFS)-based techniques to the business rules; and modifying the business rules based on the identified faults. CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, CHAN et al. and HWANG et al. do not disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, as recited in claim 1. The Examiner admits that CHAN et al. does not disclose this feature and relies on Figs. 6 and 7 and section 4.2 (which describes Fig. 7) of HWANG et al. as allegedly disclosing this feature of claim 1 (Office Action, pg. 4). Applicant respectfully disagrees with the Examiner's interpretation of HWANG et al.

Fig. 6 of HWANG et al. summarizes the criteria for detecting reuse defect patterns in a given transition directed-graph (TDG). More specifically, Fig. 6 of HWANG et al. discloses detecting reuse defect patterns using a depth-first search (DFS) (section 4.1). Identifying software reuse defect patterns does not correspond to identifying faults in business rules. In fact, HWANG et al. deals with identifying, assessing, and classifying defects introduced by reusing object definitions in application object structures (section 1.2) and has nothing to do with identifying faults in business rules. Therefore, Fig. 6 of HWANG et al. does not disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, as recited in claim 1.

Section 4.2 of HWANG et al. discloses C++ pseudo code for Generic-DFS algorithms. Although this section of HWANG et al. discloses a depth-first search, this

section of HWANG et al. does not disclose or suggest applying DFS-based techniques to business rules to identify faults in the business rules. Therefore, this section of HWANG et al. does not disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, as recited in claim 1.

For at least the foregoing reasons, Applicant submits that claim 1 is patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination.

Claims 2-4 and 6-8 depend from claim 1. Therefore, these claims are patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1. Moreover, these claims recite additional features not disclosed or suggested by CHAN et al. and HWANG et al.

For example, claim 2 recites representing the business rules using a transition-directed graph (TDG) representation. The Examiner relies on Figs. 4 and 5 and sections 4 and 4.1 of HWANG et al. as allegedly disclosing this feature of claim 2 (Office Action, pg. 5). Applicant respectfully disagrees with the Examiner's interpretation of HWANG et al.

Fig. 4 of HWANG et al. discloses a TDG where each node represents either an identifier invariant assertion (represented as a bar) or an axiom (represented as a cycle) (section 4.1). While Fig. 4 of HWANG et al. illustrates a TDG, Fig. 4 of HWANG et al. does not disclose or suggest representing business rules using a transition-directed graph (TDG) representation, as recited in claim 2.

Fig. 5 of HWANG et al. illustrates TDG-based definitions for four reuse defects (section 4.1). Fig. 5 of HWANG et al. does not disclose or suggest representing the business rules using a transition-directed graph (TDG) representation, as recited in claim 2.

Section 4 of HWANG et al. discloses that a TDG is used to represent invariant assertions into a directed graph. This section of HWANG et al. does not disclose or suggest representing business rules using a transition-directed graph (TDG) representation, as recited in claim 2. In fact, this section of HWANG et al. does not disclose business rules at all.

Section 4.1 of HWANG et al. discloses that, based on predicate logic expressions, each edge in a given TDG connects two nodes with a direction from one to the other. This section of HWANG et al. does not disclose or suggest representing business rules using a transition-directed graph (TDG) representation, as recited in claim 2. In fact, this section of HWANG et al. does not disclose business rules at all.

The disclosure of CHAN et al. does not remedy the deficiencies in the disclosure of HWANG et al. set forth above.

For at least these additional reasons, Applicant submits that claim 2 is patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination.

Independent claims 9, 17, and 22 recite features similar to, yet possibly of different scope than, features recited above with respect to claim 1. Therefore, claims 9, 17, and 22 are patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1.

Claims 11, 12, and 14-16 depend from claim 9. Therefore, claims 11, 12, and 14-16 are patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 9. Moreover, these claims recite additional features not disclosed or suggested by CHAN et al. and HWANG et al.

For example, claim 10 recites features similar to, yet possibly of different scope than, features recited above with respect to claim 2. Therefore, claim 10 is patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least reasons similar to the reasons given above with respect to claim 2.

Claims 18-21 depend from claim 17. Therefore, claims 18-21 are patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 17. Moreover, these claims recite additional features not disclosed or suggested by CHAN et al. and HWANG et al.

For example, claim 21 recites features similar to, yet possibly of different scope than, features recited above with respect to claim 2. Therefore, claim 21 is patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least reasons similar to the reasons given above with respect to claim 2.

Claims 23-25, 27, and 28 depend from claim 22. Therefore, claims 23-25, 27, and 28 are patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 22. Moreover, these claims recite additional features not disclosed or suggested by CHAN et al. and HWANG et al.

For example, claim 23 recites features similar to, yet possibly of different scope than, features recited above with respect to claim 2. Therefore, claim 23 is patentable over CHAN et al. and HWANG et al., whether taken alone or in any reasonable combination, for at least reasons similar to the reasons given above with respect to claim 2.

**Rejection under 35 U.S.C. § 103 based on CHAN et al., HWANG et al, and BAHRAMI**

Claims 5, 13, and 26 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHAN et al. in view of HWANG et al. and BAHRAMI. Applicant respectfully traverses this rejection.

Claim 5 depends from claim 4. Without acquiescing in the rejection of claim 5, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies in the disclosures of CHAN et al. and HWANG et al. set forth above with respect to claim 4. Therefore, claim 5 is patentable over CHAN et al., HWANG et al., and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 4.

Claim 13 depends from claim 12. Without acquiescing in the rejection of claim 13, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies in the disclosures of CHAN et al. and HWANG et al. set forth above with respect to claim 12. Therefore, claim 13 is patentable over CHAN et al., HWANG et al., and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 12.

Claim 26 depends from claim 25. Without acquiescing in the rejection of claim 26, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies

in the disclosures of CHAN et al. and HWANG et al. set forth above with respect to claim 25. Therefore, claim 26 is patentable over CHAN et al., HWANG et al., and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 25.

### **Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests withdrawal of the outstanding rejections and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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